

Updating Your Database Administration Skills to Microsoft SQL Server 2005 Course 2733

Introduction

This three-day instructor-led course provides students with the knowledge and skills to upgrade their skills to SQL Server 2005 so that they can support, configure, and maintain enterprise SQL Server 2005 databases and servers.

Audience

This course is intended for experienced database administrators and database developers who are responsible for the supporting, configuring, and maintaining enterprise SQL Server 2005 databases and servers.

At Course Completion

After completing this course, students will be able to:

- Describe the architecture of SQL Server 2005.
- Install SQL Server 2005.
- Use SQL Server 2005 administrative tools and utilities.
- Maintain SQL Server 2005 servers and databases.
- Secure a SQL Server 2005 server and database.
- Monitor SQL Server 2005.
- Implement a Backup and Restore solution for SQL Server 2005.
- Implement a data availability solution with database mirroring or clustering.
- Use enhanced SQL Server 2005 replication features.

Prerequisites

Before attending this course, students must have:

- MCDBA certification or equivalent knowledge.
- Administration experience with Microsoft SQL Server 2000 or Microsoft SQL Server 7.0.
- Knowledge of SQL Server 2000/7.0:
 - Database and server architecture.
 - Installation and configuration.
 - Database security.
 - Database recovery (backup and restore).
- SQL Server technologies used for database availability such as log shipping and clustering.
- Job automation.
- Database and server monitoring.
- Troubleshooting.
- Replication.

In addition, it is recommended, but not required, that students have completed:

- Course 2072, Administering a Microsoft SQL Server 2000 Database.

Microsoft Certified Professional Exams

No Microsoft Certified Professional exams are associated with this course currently.

Course Outline

Module 1: Overview of SQL Server 2005 Architecture

This module introduces students to the various components and services that comprise SQL Server. Database administrators are often required to manage multiple aspects of the database server – not just the relational database engine, so an awareness of the components and functionality available in SQL Server 2005 is essential in order to prepare database administrators for SQL Server 2005 deployments and management.

Lessons

- Overview of SQL Server 2005
- System Enhancements for Administrators

After completing this module, students will be able to:

- Describe the components of SQL Server 2005.
- Describe new and enhanced features for administrators in SQL Server 2005.

Module 2: Installing SQL Server 2005

This module explains how to plan for a SQL Server 2005 installation, install SQL Server 2005 and maintain a SQL Server 2005 installation.

Lessons

- Preparing to Install SQL Server 2005
- Performing a SQL Server 2005 Installation
- Maintaining a SQL Server 2005 Installation

Lab 2: Installing SQL Server 2005

- Installing a SQL Server Instance.

After completing this module, students will be able to:

- Plan a SQL Server 2005 installation.
- Install SQL Server 2005.
- Maintain a SQL Server 2005 installation.

Module 3: SQL Server 2005 Administrative Tools

This module explains what built-in administration tools and utilities are available in Microsoft SQL Server 2005 and how they can be used to help database administrators be successful in managing a SQL Server 2005 solution.

Lessons

- Using SQL Server Workbench
- Using SQL Server Computer Manager
- Using the sqlcmd Utility
- Using the SQL Management Objects

Lab 3: Administering SQL Server 2005

- Creating the Personnel database.
- Populating the Personnel database.
- Using SMO.

After completing this module, students will be able to:

- Choose the appropriate tool or utility to perform an administrative task.
- Use SQL Server Workbench to manage databases.
- Use SQL Server Computer Manager to manage a server.
- Use the sqlcmd utility to execute Transact-SQL from the command prompt.
- Use SQL Management Objects to script common administrative tasks.

Module 4: Monitoring SQL Server 2005

This module discusses the various tools and techniques you can use to monitor Microsoft SQL Server 2005.

Lessons

- Using SQL Profiler
- Using DDL Triggers
- Using Event Notifications
- Using the System Virtual Tables

Lab 4: Monitoring SQL Server 2005

- Using Profiler
- Creating DDL Triggers
- Creating Event Notifications

After completing this module, students will be able to:

- Use SQL Profiler to monitor SQL Server 2005.
- Use DDL triggers to capture DDL events.
- Use event notifications to respond to database events.
- Use the system virtual tables to monitor database activity.

Module 5: Maintaining Databases and Indexes

This module explains the tools and utilities in Microsoft SQL Server 2005 that can help you implement database maintenance plans, manage database indexes, and tune databases.

Lessons

- Using the Database Maintenance Plan Wizard
- Managing Indexes
- Using the Database Tuning Advisor

Lab 5: Maintaining a Database

- Creating a Database Maintenance Plan
- Defining Indexes
- Tuning a Database

After completing this module, students will be able to:

- Maintain SQL Server 2005 databases.
- Use the Database Maintenance Plan Wizard to automate tasks.
- Maintain indexes in a SQL Server 2005 database.
- Use the Database Tuning Advisor to assist with database design.

Module 6: Securing SQL Server 2005

This module explains the changes and enhancements to the Microsoft SQL Server security model in SQL Server 2005.

Lessons

- SQL Server 2005 Security Overview
- Managing SQL Server 2005 Security
- SQL Agent Security

Lab 6: Securing a SQL Server 2005 Database

- Managing securables
- Managing principals
- Managing Permissions
- Dropping a User that Created Objects.

After completing this module, students will be able to:

- Describe the security architecture of SQL Server 2005.
- Manage securables, principals, and permissions.
- Manage SQL Agent security.

Module 7: Disaster Recovery

This module you will learn about the enhanced backup and restore functionality in Microsoft SQL Server 2005.

Lessons

- Disaster Recovery in SQL Server 2005
- Using Database Snapshots
- Backup and Restore Operations

Lab 7: Managing Disaster Recovery

- Creating a Database Snapshot
- Backing up a Database

After completing this module, students will be able to:

- Describe common disaster recovery strategies for SQL Server 2005.
- Create database snapshots.
- Perform backup and restore operations.

Module 8: Data Availability

This module teaches you how to take advantage of the high availability features found in SQL Server 2005

Lessons

- Introduction to Data Availability
- Introduction to Database Mirroring
- Configuring Database Mirroring
- Lab 8: Maintaining Availability
- Preparing the Principal and Mirror Server
- Establishing a Mirroring Session
- Establishing a Witness Server
- Executing Transactions
- Simulating Principal Server Failure
- Restarting the Failed Server
- Terminating the Mirror Session
- After completing this module, students will be able to:
- Describe the data availability technologies included in SQL Server 2005.
- Describe the concepts of database mirroring.
- Configure database mirroring.

Module 9: Replication

This module explains the new and enhanced replication features in SQL Server 2005

Lessons

- Overview of Replication Enhancements
- New Types of Replication
- Configuring Replication
- After completing this module, students will be able to:
- Describe the enhancements to replication functionality in SQL Server 2005.
- Describe the new types of replication available in SQL Server 2005.
- Configure replication using SQL Server 2005.